

KOST, G.E., kand. tekhn. nauk; KOTOV, M.A., kand. tekhn. nauk; KOLOYAROV,
V.K., inzh.; BELOGRUDOV, Yu.V., inzh.

Experimental testing of the KL-2 belt conveyer. Nauch. soob.
IGD 26:40-48 '65. (MIRA 18:9)

KOST, G.N., kand. tekhn. nauk

Determining the maximum loads of the traction chain of inclined multi-
drive apron and belt-chain conveyers. Nauch. soob. IGD 26:62-70 '65.
(MIRA 18:9)

KOST, G.N., kand. tekhn. nauk; D'YAKOV, V.A., inzh.

Experimental testing of the elasticity of rubber rope belts in
the field. Nauch. soob. IGD 26:71-74 '65. (MIRA 18:9)

KOST, K.; VARTAPETYAN, B.B.

Diminished mobility of water in a partially dehydrated cell.
Fiziol. rast. 12 no.3:390-393 My-Je '65. (MIRA 18:10)

1. Natsional'nyy tsentr agronomicheskikh issledovaniy,
Versal', Frantsiya, i Institut fiziologii rasteniy imeni
K.A. Timiryazeva AN SSSR, Moskva.

SHEVCHUK, B.G.; KOST', L.L.

System Ca_2SO_4 - BaSO_4 - H_2O at 35°C . Zhur.neorg.khim. 10 no.11:2551-
2553 N '65. (MIRA 18:12)

1. Poltavskiy inzhenerno-stroitel'nyy institut, Kafedra khimii.
Submitted May 5, 1964.

SHEVCHUK, V.G.; KOST', L.L.

Equilibria in the systems $\text{Cs}_2\text{SO}_4 - \text{MgSO}_4 - \text{H}_2\text{O}$ and
 $(\text{NH}_4)_2\text{SO}_4 - \text{MgSO}_4 - \text{H}_2\text{O}$ at 35° . Zhur. Neorg. khim. 9 no.2:
432-436 F'64. (MIRA 17:2)

1. Poltavskiy inzhenerno-stroitel'nyy institut, kafedra khimii.

SHEVCHUK, V.G.; KOST', L.L.

System $\text{Li}_2\text{SO}_4 - \text{K}_2\text{SO}_4 - \text{MgSO}_4 - \text{H}_2\text{O}$ at 35°C . Zhur. neorg.
khim. 9 no.5:1242-1245 My '64. (MIRA 17:9)

1. Poltavskiy inzhenerno-stroitel'nyy institut.

KOST, M.Ye.

Chemical properties of cerium hydrides. Zhur. neorg. khim. 2 no.12:
2689-2693 D '57. (MIRA 11:2)

(Cerium hydrides)

KOST M. Ye

AUTHOR

MIKHEYEVA V.I., KOST M. Ye.

20-1-27/54

TITLE

Interaction of Cerium with Hydrogen.

PERIODICAL

(O vzaimodeystvii tseriya s vodorodom -Russian)
Doklady Akad.Nauk SSSR, 1957, Vol 115, Nr 1, pp 100-102 (U.S.S.R.)

ABSTRACT

Metal cerium begins to absorb the hydrogen in which it is heated at 250-300° C and forms a hydride of varying composition. I.I. Zhukov asked whether there existed a cerium hydride of a stoichiometric composition CeH_2 . It was confirmed by calorimetric investigations by K. Kialer. On that occasion a hydride CeH_2 was further obtained. As initial metal for the present work cerium with a content of 2,9 Nd and Pr was used. The determination of the hydrogen connected with cerium was performed in parallel by three methods: 1) according to the amount of hydrogen absorbed (pressure drop in the system), 2) according to the increase in weight of the cerium-metal sample, and 3) according to the hydrogen volume which escapes on solution of the hydride in diluted HCl. In the hydration it was found that, in contrast to published data, the hydration of cerium, after careful purification of the initial products, takes place at room temperature without previous heat-treatment of the sample. The composition of the product developing on this occasion varies between CeH_2 and $CeH_{3.16}$. This composition is independent of hydrogen pressure. The following conclusion may further be drawn from the results obtained. The curve of dependence of the hydride composition on temperature, and the curves of hydration speed confirm the formation

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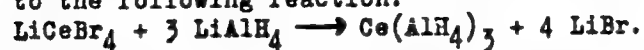
KOST, M.Ye., Cand Chem Sci -- (diss) "Synthesis and study of certain properties of hydrides of cerium." Mos, 1958, 14 pp
(Acad Sci USSR. Inst of General and Inorganic Chemistry
in N.S. Kurnakov) 110 copies (KL, 50-58, 120)

- 17 -

On Cerio Hydrides.

78-2-2/43

CeH_2 melts at 1080°C with the beginning of decomposition.
The synthesis of ceric aluminum hydride takes place according to the following reaction:



The synthesis of ceric-aluminum hydride confirms the existence of CeH_2 as a chemical compound. There are 9 figures, 1 table, and 26 references, 6 of which are Slavic.

SUBMITTED: February 27, 1957

AVAILABLE: Library of Congress

Card 2/2

5(2)

SOV/78-4-7-4/44

AUTHORS:

Kost, M. Ye., Gol'der, G. A.

TITLE:

The Crystal Structure and Density of Cerium Hydrides (Kristallicheskaya struktura i plotnost' gidridov tseriya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1488-1490 (USSR)

ABSTRACT:

Cerium hydrides with a composition of from $CeH_{0.2}$ to CeH_3 were investigated. The trihydride was produced in an apparatus described in an earlier paper (Ref 5). The samples poor in hydrogen were obtained by heating and by sucking off the liberated hydrogen. The composition of the hydrides was determined by measuring the hydrogen liberated in a solution of hydrochloric acid. The Debye powder patterns were recorded by means of the camera RKD. The values of the lattice periods are given by table 1. Up to the composition $CeH_{1.5}$ two cubical face-centered lattices exist, which correspond to the metal Ce and to the dihydride. The sample $CeH_{1.97}$ shows a phase in the period 5.55 Å. A further increase of the hydrogen content leads to a reduction of the period to 5.53 Å at $CeH_{2.73}$. If the com-

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The Crystal Structure and Density of Cerium Hydrides

SOV/78-4-7-4/44

position CeH_3 is approached, the lines widen, so that exact calculation of the lattice period is rendered difficult. Because of the great sensitivity of cerium hydrides to vestiges of water, density was determined in an apparatus (Fig 1), in which argon was used as a pycnometric substance, and in which the volume of the sample was determined on the basis of a variation of pressure according to the Boyle-Mariotte law. The density of the various hydrides is given by table 2. It decreases up to the compound CeH_2 , after which it rises somewhat up to CeH_3 .

Figure 2 gives a graphical comparison of density variations with the X-ray pictures, the curve of which shows the presence of two phases (metallic cerium and CeH_2) up to the compound CeH_2 .

The lines of the metallic Ce then vanish. The phase with the periods 5.645 - 5.612 Å, which was observed by M. C. Auphas-sorho (Refs 3,4) could not be found. There are 2 figures, 2 tables, and 8 references, 2 of which are Soviet.

SUBMITTED: April 4, 1958

Card 2/2

PLANE 1 BOX INFORMATION 207/164
 Vsesoyuznyy nauchnoissledovaniye po splavam rezhim metallor. 1st, Moscow, 1957
 Medkiye metallurgii i splavy: trud... (Rare Metals and Alloys; Transactions of the
 First All-Union Conference on Rare-Metal Alloys) Moscow, Metallurgizdat, 1960.
 428 p. 3,150 copies printed.
 Sponsoring Agencies: Akademiya nauk SSSR. Institut metallurgii; NISZ
 Nauchnyy po rezhim metallurgii i splavam rezhim metallor komiteta.
 Ed.: I.K. Shapovalov; Ed. of Publishing House: O.M. Kamyayev; Tech. Ed.:
 P.O. Tolstoy.

PURPOSE: This collection of articles is intended for metallurgical engineers,
 physicists, and workers in the machine-building and metal engineering industries.
 It may also be used by students of schools of higher education.

CONTENTS: The collection contains technical papers which were presented and dis-
 cussed at the First All-Union Conference on Rare-Metal Alloys, held in the In-
 stitute of Metallurgy, Academy of Sciences USSR in November 1957. Results of
 investigations of rare-metal alloys, titanium, and copper-base alloys with ad-
 ditions of rare metals are presented and discussed along with investigations of
 titanium, vanadium, niobium, and their alloys. The effect of rare-earth metals
 on properties of magnesium alloys and steels is analyzed. The uses of titanium
 as a catalytic catalyst, electroplating material, and material suitable for
 making plates for automobile electrical systems are discussed. Also, the ef-
 fect of the addition of certain elements on the properties of heat-resistant
 steel is examined and alloys with special physical properties (particularly
 semiconductive alloys) are discussed. No personalities are mentioned. Soviet
 and non-Soviet references accompany some of the articles.

PART II. TITANIUM AND
 ALLOYS WITH RARE-METALS

Rare Metals (Cont.)

207/164
 Andriyevskiy, I.F., A.I. Glushkov, Ya.A. Izrael'skiy, L.I. Seleznev, and M.Y.
 Kalitovskiy. Corrosion Resistance of Titanium and Its Alloys 156

PART IV. RARE-EARTH METALS
 AND THEIR EFFECT ON PROPERTIES OF MAGNESIUM ALLOYS

Rabobikhin, D.I., and Yu.S. Stolyarskiy. Rare-Earth Elements and Possibilities
 of Producing Them 171

Igda, Y.M., V.M. Belykh, and L.M. Reznik. Production of Aluminum-Cerium,
 Titanium-Lanthanum, Magnesium-Cerium, Magnesium-Lanthanum, and Magnesium-
 Neodymium Alloys by Electrolysis 180

Terekhov, V.F., and V.M. Reznik. Investigation of Physicochemical
 Interaction of Rare-Earth Metals with Magnesium, Iron, Chromium and Titanium 189

Ribnikov, I.L., and M.Ye. Ioffe. Properties of Rare-Earth Metals and Possibi-
 lities of Their Practical Utilization 202

Card 2/8

KOSTI M.YE.

5(2)

AUTHORS:

Mikheyeva, V.I., Kost, M.Ye.S/074/60/029/01/003/005
B008/B006

TITLE:

Hydrides of Rare-earth Metals

PERIODICAL:

Uspekhi khimii, 1960, Vol 29, Nr 1, pp 55-73 (USSR)

ABSTRACT:

It is attempted to generalize the existing material on the hydrides of the rare earth metals. A general method for preparing rare earth hydrides is the direct reaction between metal and hydrogen (Refs 5-8). Lately, exchange reactions in nonaqueous and aqueous media have also been applied (Refs 9-17). The synthetic of binary boron¹ and aluminum¹ hydrides of numerous transition metals may be regarded as proof for the existence of their monovalent hydrides (Refs 18-22). The reaction between lanthanum¹ and hydrogen is described in references 23-42. Of the lanthanides, the most easily accessible is cerium. Therefore, the hydrides of the latter were investigated in greatest detail, the chemical and physical properties of the rare-earth metal hydrides being obtained by studying the reaction between them and hydrogen (Refs 5, 23-25, 28, 33, 44-47). Increasing research in this field after 1950 yielded new data. The kinetics of the hydrogenation of cerium¹ are discussed in

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Hydrides of Rare-earth Metals

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references 5,7,27,47,49-51, the composition of cerium hydrides is reported in references 7,8,20,25,27,31,33,49,52, their dissociation pressure in references 5,25,32,47,49, their structure in references 31,35,53-56, their physical and chemical properties in references 7,28,31,49,53,57-59 and 20,23,25,45, 60 respectively. Binary cerium- and aluminum hydrides are discussed in references 18-22. The reaction of other rare earth metals with hydrogen is treated in the following papers: praseodymium[✓] references 28,31,32,35,41,61,62; neodymium[✓] references 24,31,32,61,62; samarium[✓] references 23,24,63-66; europium[✓] references 63,67; gadolinium[✓] references 31,64, 68-70; ytterbium[✓] references 60,63,67. Some special features of rare earth metal hydrides are discussed in references 2,3, 8,20,32,56,58,70-92. The investigation of the composition and properties of these hydrides revealed some of the rare earth metals, which are extremely alike in certain respects, but possess certain individual peculiarities. Thus, e.g., a hexagonal structure is found for samarium- and gadolinium trihydride. Furthermore, certain facts indicate the existence of a Gd_2H_3 -compound. The properties of the europium- and ytterbium hydrides,

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Hydrides of Rare-earth Metals

S/074/60/029/01/003/005
B008/B006

which resemble those of the alkali earth elements, vary particularly from the properties of the other rare earth hydrides. It is evident from experimental data that both compounds of constant composition, and phases of variable composition are involved in the equilibrium of the rare earth metal - hydrogen systems. The solid MeH_2 - MeH_3 phases, investigated for cerium and lanthanum, are of particular interest for finding the rules which are followed by the chemical compounds when entering into solution. According to N.S.Kurnakov's theory on berthollides, there exists a changing equilibrium between some valencies of the rare earth metals. Some properties of the rare earth hydrides, as e.g. the thermal stability of the dihydrides, and the change in the type of chemical bond occurring in the MeH_2 - MeH_3 region, indicate that their application in various fields of metallurgy, in heterogeneous catalytic synthesis, and in the technology of semiconductors will yield positive results. The following Soviet scientists are mentioned: V.I.Mikheyeva, M.Ye.Kost, I.I.Zhukov, and B.V.Nekrasov. There are 7 figures, 8 tables, and 92 references, 20 of which are Soviet.

Card 3/4

S/078/62/007/007/001/013
B179/B101

AUTHORS: Mikheyeva, V. I., Kost, M. Yo.

TITLE: Some properties of lanthanum and neodymium hydrides

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 7, 1962, 1493-1499

TEXT: The hydrogenation of La, Nd, and cerium misch metal (~50% Ce, 45% other RE, 2% Fe) and the properties of the hydrides were studied. La and Nd react with H_2 (p_{H_2} ~650 mm Hg) even at room temperature. When La, Nd,

and misch metal were hydrogenated simultaneously the induction period for misch metal was 5 min and for La 10 min whereas for Nd it was longer than 1.5 hrs. La forms a di- and trihydride (LaH_2 and LaH_3), Nd forms a

hydride of the composition $NdH_{2.4 \pm 0.1}$, and the composition of the misch metal hydride is $\sim MeH_3$. At $100^\circ C$ the hydrogenation of La was unsuccessful but at $200^\circ C$ hydrogenation starts without induction period. The rate of hydrogenation of La shows a minimum at $300 - 500^\circ C$ and a maximum at $700^\circ C$. It was LaH_3 that reacted most intensely with H_2O whereas hydrides with
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Some properties of lanthanum...

S/078/62/007/001/013
B179/B101

lower hydrogen content hydrolyzed more slowly. Thermal decomposition of all hydrides takes place in two phases. Transition from trihydride to dihydride occurs at $150 - 620^{\circ}\text{C}$ for misch metal, at $350 - 840^{\circ}\text{C}$ for La. Dissociation of the dihydride sets in between 950 and 1300°C but is never complete. The density of $\text{NdH}_{2.4}$ was found to be 6.08 ± 0.04 . Since the density of NdH_2 is 5.91 ± 0.03 this means that further hydrogenation has the effect of contracting the crystal lattice. There are 8 figures and 5 tables. ✓

SUBMITTED: August 24, 1961

Card 2/2

35000

S/020/62/143/001/021/030
B106/B138

5,730°

AUTHOR: Kost, M. Ye.

TITLE: Yttrium hydride

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 1, 1962, 119 - 121

TEXT: The products of the hydration of yttrium were studied. Initial metallic yttrium was produced at Giredmet and contained the following impurities (in %):

	Fe	Ca	Cu	other rare earths
Sample I	0.04	0.05	0.03	~ 1
Sample II	0.04	0.004	0.02	~ 8

The hydrides were produced by direct reaction of the metal with hydrogen. The hydrogen content was determined volumetrically. The impurities by other rare earths were taken into account by corresponding corrections when the hydrogen content was calculated. The experiments showed that pure yttrium (sample I) did not absorb hydrogen at room temperature. Less pure yttrium (sample II) reacts with hydrogen at lower temperatures. The results, however, are insufficiently reproduceable, and in many cases

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Yttrium hydride

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the induction period takes such a long time that the reaction practically does not occur. The induction period was lowered by preliminary thermal treatment of the metal. The optimal conditions for hydration are obtained when the metal is vacuum heated at 400°C for 30 minutes, prior to hydration. In this case, the induction period takes only 40 - 60 min. In all cases except one yttrium absorbed hydrogen under these conditions up to the approximate composition $\text{YH}_{1.6}$. When the purer metal was used

the results were readily reproducible (atomic ratio $\text{H}:\text{Y} = 1.59 \pm 0.02$). Increase in temperature to 250°C did not influence the absorption. With sample II the results were less constant, the atomic ratio fluctuating between 1.51 and 1.84. The rise of temperature led to a marked decrease of sorption. Yttrium hydride is a blue gray brittle substance of stratified structure, which can easily be pulverized. Its density is 4.24 ± 0.15 . Yttrium hydride is comparatively constant chemically. It does not change its composition in the air in the course of 1 hr and it reacts very slowly with water. Thermographic analyses showed that yttrium decomposition takes place in 2 stages. The first (at 360 - 410°C) corresponds to the delivery of hydrogen, which is excessive in relation to the composition YH . The second step (at 1100 - 1300°C) corresponds to the

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X

Yttrium hydride

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transition of the monohydride into metallic yttrium. This thermal decomposition differs fundamentally from that of hydrides of all other relevant rare earths so far investigated. A fundamental difference of yttrium hydride from the hydrides of other rare earths of the same composition can also be observed in X-ray analysis data. Whereas the hydrides of cerium, lanthanum, neodymium, etc., constitute a mixture of the metal with the dihydride in the Me-MeH₂ composition range, no line characteristic of metallic yttrium was found in the Debye crystallogram of a sample of the composition YH_{1.6}. There are 1 figure, 1 table, and 7 references: 4 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: C. E. Holley, R. N. Mulford et al., J. Phys. Chem., 59, 1226 (1955).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

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Yttrium hydride

S/020/62/143/001/021/030
B106/B138

PRESENTED: October 12, 1961, by I. I. Chernyayev, Academician

SUBMITTED: October 12, 1961

Card 4/4

X

L 18963 -63

EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG.

ACCESSION NR: AP3006598

S/0020/63/151/006/1360/1363⁶²₃₉

AUTHORS: Vaynshteyn, E. Ye.; Bril', M. N.; Stary'y, I. B.;
Kost, M. Ye.

TITLE: Some results of X-ray study of ceriumⁿⁿ and lanthanumⁿⁿ
hydridesⁿⁿ

SOURCE: AN SSSR. Doklady*, v. 151, no. 6, 1963, 1360-1363

TOPIC TAGS: electron bond, valence, hydrogen bond, metallic
bond, La, Ce, X-ray spectra, hydride preparation,
hydride storage

ABSTRACT: Use of hydrides of rare earth elements in
metallurgy, vacuum technique, and synthesis created interest
for additional information concerning the physico-chemical
properties of these compounds. Authors studied the hydrides
LaH_{1.97}, LaH_{2.28}, LaH_{2.88}, CeH₂, CeH_{2.24}, and CeH_{2.88} by X-ray
spectrometry. Samples for investigation were prepared by

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ACCESSION NR: AP3006598

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direct reaction of hydrogen and metals at room temperature. Hydrides with lower hydrogen content were prepared by heating high hydrogen-content hydrides. Hydrides were impregnated on silk cloth and sealed in polyethylene envelopes. Preparation was accomplished in a dry chamber, filled with CO₂ and operated from outside. Prepared samples were kept in a container under vacuum. Results of investigation indicate that cerium and lanthanum in hydride form have three valences and valence energy only partly used in formation of ionic bonds with hydrogen, while the rest of it is used to produce metallic bonds. This fact has a direct bearing on decrease of electrical conductivity with an increase of hydrogen content. Orig. art. has: 4 figures.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Inorganic Chemistry, Siberian Division, Academy of Sciences, SSSR), Institut neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of Inorganic Chemistry, Academy of

Card

2/2

KOST, M.Ye.; MAL'TSEVA, N.N.; MIKHEYEVA, V.I.

Concerning the existence of iron hydride. Zhur. neorg. khim.
9 no.5:1053-1059 My '64. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR.

KOST, M. Ye.; MAL'TSEVA, N.N.

Conference on the Chemistry of Inorganic Hydrides. Zhur. neorg.
khim. 9 no.8:2048-2050 Ag '64.

(MIRA 17:11)

I 17712-66 EWP(j)/EWT(m) RM/WW

ACC NR: AP6006312

SOURCE CODE: UR/0413/66/000/002/0027/0027

AUTHOR: Korneyev, N.N.; Zhigach, A.F.; Kost, M. Ye.; Korotkov, Ye. N.

OR(): none

TITLE: Method of preparing triethylaluminum

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no.2, 1966, 27
Class 12, No. 177884

TOPIC TAGS: organic chemistry, cerium, neodymium, catalyst specific reaction

ABSTRACT: A method of preparing triethylaluminum by direct synthesis via formation of diethylaluminum hydride in the presence of a hydrogenation catalyst is presented; it is distinguished by the use of lanthanides, such as lanthanum, cerium, neodymium, or their hydrides as catalysts, for the purpose of increasing the rate of hydrogenation and the efficiency of the process. [11]

SUB CODE: 07 / SUBM DATE: 22 May 63 / ATD PRESS: 4210

Card 1/1 nat

UDC: 547.212'256.2.05

Kest, T. A.

Synthesis of 1,10-decanedicarboxylic acid and 1,14-tetra-
decane dicarboxylic acid A. N. Nesmerov, L. E.
Kest, L. E. Heterocyclic Compounds

1. 1,10-decanedicarboxylic acid. 1,10-decanedicarboxylic acid was prepared by the oxidation of 1,10-decanediol with KMnO_4 in H_2SO_4 . The yield was 80%. The melting point was 152-153°C. The boiling point was 180-181°C/0.5 mm Hg. The refractive index was 1.450. The density was 1.150. The molecular weight was 234.2. The elemental analysis was: C, 63.5%; H, 9.5%; O, 27.0%. The IR spectrum showed a strong absorption at 1710 cm^{-1} . The ^1H NMR spectrum showed a broad peak at 11.5 ppm (s, 2H) and a multiplet at 1.5-2.0 ppm (m, 18H). The mass spectrum showed a molecular ion peak at m/z 234.

2. 1,14-tetradecanedioic acid. 1,14-tetradecanedioic acid was prepared by the oxidation of 1,14-tetradecanediol with KMnO_4 in H_2SO_4 . The yield was 75%. The melting point was 152-153°C. The boiling point was 180-181°C/0.5 mm Hg. The refractive index was 1.450. The density was 1.150. The molecular weight was 270.4. The elemental analysis was: C, 63.5%; H, 9.5%; O, 27.0%. The IR spectrum showed a strong absorption at 1710 cm^{-1} . The ^1H NMR spectrum showed a broad peak at 11.5 ppm (s, 2H) and a multiplet at 1.5-2.0 ppm (m, 22H). The mass spectrum showed a molecular ion peak at m/z 270.

which gave 1,10-decanedicarboxylic acid. Hydrogenation of 90%
gave 1,10-decanedicarboxylic acid. Hydrogenation of 90%
gave 1,10-decanedicarboxylic acid.

and 0.5 g of 1,14-tetradecanedioic acid. Hydrogenation of 90%
gave 1,14-tetradecanedioic acid. Hydrogenation of 90%
gave 1,14-tetradecanedioic acid.

(OVER)

Continued on P. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 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1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 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2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060,

A. N. NESMEYANOV
 1,5,6,10-tetrachloro-5-decene with 11 g. NaCN and 1 g. NaI in 5 ml. H₂O and 40 ml. EtOCH₂CH₂OH 4 hrs. at 102-6° gave 88% 1,10-dicyano-5,6-dichloro-5-decene (I), bp 102-6°, n_D²⁰ 1.4295. Similarly 1,7,8,14-tetrachloro-7-tetradecene gave 86% 1,14-dicyano-7,8-dichloro-7-tetradecene (II), d. 212-13° (pressure unlisted), n_D²⁰ 1.4835. I (14.5 g.) reduced 15 hrs. with 60 ml. AcOH, 35 ml. concd. HCl and 18 ml. H₂ in 10% NaOH in 10% 1,10-dicyano-5-decene-1,10-dicarboxylic acid, m. 104-5-55° (from C₁₀H₁₆). Similarly II in 3 hrs. gave 94%. 7,8-dichloro-7-tetradecene-1,14-dicarboxylic acid, m. 95-6°. The former was hydrogenated over Raney Ni in 10% NaOH at 100 atm at 60-70° to 62% 1,10-decanedicarboxylic acid, while the latter unsaturated was hydrogenated to 94% 1,14-tetradecanedicarboxylic acid. Hydrogenation of I over Pt H₂SO₄ in MeOH, Pt/H₂ gave 75% 1,16-dicyanotetradecane, m. 48-9°. Similarly 1,5,6,10-tetrachlorodecane gave dicyanotetradecane-1,10-ane which hydrolyzed to 1,5,6,10-tetrachlorodecane-1,10-dicarboxylic acid, m. 223° (from EtOH). Reaction of 1,10-dichlorodecane with NaCN as described above gave 92% 1,10-dicyanodecane, b. 156-7°, while 1,10-dichlorodecane gave 60% 1,14-dicyanotetradecane. G. M. K.

2/2

178
 92%

4 6 - 1
FREYDLINA, R.Kh.; KOST, T.A.

The action of nucleophilic reagents on $[Cl(CH_2)_n CCl_2-]_2$ type compounds. Izv. AN SSSR. Otd. khim. nauk no. 5:644-646 My '57.

(MLBA 10:8)

1. Institut elementoorganicheskikh soedineniy Akademii nauk SSSR.
(Chemical tests and reagents) (Paraffins)

86410

S/062/60/000/008/018/033/XX
B013/B055

5.3700

2209, 1326, 1282

AUTHORS: Freydlina, R. Kh. and Kost, T. A.

TITLE: Effect of Nucleophilic Reagents on Compounds of the Type
 $[Cl(CH_2)_nCCl-]_2$

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 8, pp. 1387-1390

TEXT: The present paper treats the effect of nucleophilic reagents on compounds with the structure $[Cl(CH_2)_nCCl-]_2$. These compounds are formed by direct catalytic hydrogenation of $\alpha, \alpha, \alpha, \omega$ -tetrachloro alkanes (Refs. 1, 2) or by the reaction of compounds of the type $[Cl(CH_2)_nCCl_2-]_2$ with zinc. α, ω -disubstituted dichloro alkenes and monosubstituted trichloro alkenes were obtained. Contrary to saturated 1,3,3,4,4,6-hexachloro hexane and 1,1,1,3-tetrachloro propane, 1,3,4,6-tetrachloro 3-hexene enters into exchange reactions with nucleophilic reagents, however, not as easily as higher compounds of this type. 1,1,1,9-tetrachloro nonane was also dimerized by hydrogenation. Starting from 1,9,9,10,10,18-hexa-
Card 1/2

86 410

Effect of Nucleophilic Reagents on Compounds of the Type $[Cl(CH_2)_nCCl=]_2$ S/062/60/000/008/018/033/XX
B013/B055

chloro octadecane several compounds containing 18 or 20 carbon atoms in the chain were obtained: 1,9,10,18-tetrachloro 9-octadecene ($C_{18}H_{32}Cl_4$); 9,10-dichloro 9-octadecene 1,16-dicarboxylic acid ($C_{20}H_{32}Cl_2O_2$); 1-hydroxy-9,10,18-trichloro 9-octadecene ($C_{18}H_{33}Cl_3O$). The following compounds were prepared: 1,6-bisdiethylamino-3,4-dichloro hexene ($C_{14}H_{28}Cl_2N_2$); 1-acetoxy-3,4,6-trichloro 3-hexene ($C_8H_{11}Cl_3O_2$); 5,6-dichloro 5-decene 1,10-bisdiethyl-ammonium diiodide ($C_{22}H_{46}Cl_2I_2N_2$); 1,10-diethoxy-5,6-dichloro-5-decene ($C_{14}H_{26}Cl_2O_2$); 1-acetoxy-5,6,10-trichloro 5-decene ($C_{12}H_{19}Cl_3O_2$); 1,14-diethoxy-7,8-dichloro 7-tetradecene ($C_{18}H_{34}Cl_2O_2$), and 1,14-diethyl-amino-6,7-dichloro 7-tetradecene ($C_{22}H_{44}Cl_2N_2$). There are 5 Soviet references.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: February 17, 1959

Card 2/2

FREYDLINA, R.Kh.; KOST, T.A.

Synthesis of symmetrical acetylenic hydrocarbons and their α, ω -di-derivatives starting from α, α -trichloro- and $\alpha, \alpha, \alpha, \omega$ -tetrachloroalkanes. Izv. AN SSSR. Ser.khim. no.9: 1583-1587 S '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Hydrocarbons) (Acetylene compounds) (Paraffins)

KOST, N.A., prof.

Nobel Prize for chemistry in 1965. Priroda 55 no.1:114-115
Ja '66. (MIRA 19:1)

1. Moskovskiy gosudarstvennyy universitet.

ZELINSKIY, N.D.; BOMDAR', L.S.; KOST, V.N.; LIFSHITS, B.V.

Higher ramified acids. Izv.Akad.nauk SSSR; Khim.otd. no.2:96-99
Mar-Apr 51. (CLML 20:7)

1. Laboratory of Organic Chemistry imeni N.D. Zelinskiy of Moscow
State University.

HOST, V. N.

USSR

Some reactions of 1,1,1-trichloropropylene and 1,1,3-trichloropropylene. A. N. Veselovskiy, L. I. Zakharkin, V. M. Kuznetsov, and R. Kh. Freidlin. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 200-14 (Engl. translation). See C.A. 49, 8003g. H. L. IL

(3)

USSR

Some reactions of 1,1,1-trichloroethane and 1,1,1-trichloroethylene. A. N. Nemtsov, L. I. Zakharenko, V. N. Kost, and B. Kh. Fridolina (S.D. Zelinski Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 253-65. $\text{CCl}_3\text{CH}_2\text{CH}_2\text{Cl}$ (I) (10 g.) heated with 10 g. EtOH in MeOH 5 hrs. at reflux gave 4.3 g. $\text{CCl}_3\text{CHCH}_2\text{NEt}_2$, b. 65-6°, n_D^{20} 1.4708, d_4^{20} 1.0493; HCl salt, m. 133-40°. Similar reaction of $\text{CCl}_3\text{CHCH}_2\text{Cl}$ (II) gave 65% of the same substance. II (30 g.) added to the mixt. of 3.2 g. $\text{CH}_3\text{CO}_2\text{Et}$ and 4 g. Na in abs. EtOH gave after 3 hrs. refluxing 50% $\text{EtCH}_2\text{CHCH}_2\text{CH}_2\text{CO}_2\text{Et}$ (III), b. 102-3°, n_D^{20} 1.4033, d_4^{20} 1.2136, and 11.2 g. $(\text{CCl}_3\text{CHCH}_2)_2\text{C}(\text{CO}_2\text{Et})_2$ (IV), b. 133-40°, m. 39-40°. Similar reaction of 21 g. I with 24 g. $\text{CH}_3\text{CO}_2\text{Et}$, 3.5 g. Na, and 50 ml. EtOH gave after 6 hrs. 10.3 g. III and 10.8 g. IV. I refluxed with aq. alc. NaS 4 hrs. gave 62% $(\text{CCl}_3\text{CHCH}_2)_2\text{S}$, b. 101-2°, n_D^{20} 1.6028, d_4^{20} 1.4460, which with 30% H_2O_2 in AcOH gave the sulfone, m. 113-14°. Heating 15 g. I with 3 g. Na in 50 ml abs. MeOH 3 hrs. gave 50% $\text{MeOCH}_2\text{CH}_2\text{CCl}_3$, b. 132-3°, n_D^{20} 1.4558, d_4^{20} 1.2117. Similar reaction of II was complete in 1 hr. and gave the same product as above, b. 131-2°, this with Cl in the dark at 60° gave 61% $\text{C}_2\text{H}_5\text{CH}_2\text{O}$, b. 97-8°, n_D^{20} 1.5008, d_4^{20} 1.6749, the formation of which involved both addn. and substitution with loss of HCl . Heat-

(over)

USSR/ Chemistry Organic chemistry

Card : 1/1 Pub. 40 - 4/27

Authors : Nesmeyanov, A. N., Zakharkin, L. I., Kost, V. N., and Freydina, R. Kh.

Title : Allyl regrouping in polychlorobutenic acids and about certain errors made by Auwers and Wissebach in their work regarding allyl regrouping

Periodical : Izv. AN SSSR. Otd. khim. nauk 4, 604 - 609, July - August 1954

Abstract : The relation of $\text{CHCl}_2 - \text{CH} = \text{CH} - \text{CO}_2\text{H}$ and $\text{CCl}_2 = \text{CH} - \text{CH}_2\text{CO}_2\text{H}$ acids and the corresponding relation of their derivatives to prototropic allyl regrouping, was investigated. The errors made by two German chemists, K. A. Auwers and H. Wissebach, in two-stage reduction of gamma,gamma,gammatrifluorocrotonic acid into plain crotonic acid through double isomerization, are pointed out. Seven references: 3 USSR; 2 USA and 2 German (1923 - 1954).

Institution : Acad. of Sc. USSR, Institute of Organic Chemistry

Submitted : August 23, 1953

KOST, V. N.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 40 - 6/26

Authors : Freydina, R. Kh.; Kost, V. N.; and Nesmeyanov, A. N.

Title : Chlorination and dehydrochlorination of polychloro derivatives containing reactive groups

Periodical : Izv. AN SSSR. Otd. khim. nauk 2, 233 - 239, Mar-Apr 1955

Abstract : Investigations were made to determine the reaction of chlorine with compounds containing the dichlorovinyl group and the reaction of dehydrochlorination of the dichloro-derivatives obtained. The results obtained during the chlorination of polychloro derivatives in hydrochloric acid media and dehydrochlorination under the effect of an alcohol solution of caustic potash are described. Eleven references: 5 USA, 1 English, 1 Belgian and 4 USSR and Russian (1984-1954).

Institution : Acad. of Sc., USSR, Inst. of Organcelemental Compounds

Submitted : June 3, 1954

KOST, V.N.

Chlorination of compounds containing the CCl_2CH group in sulfuric acid medium. New method of synthesis of α -chloro carboxylic acids. A. N. Nesterov, V. N. Kost, and R. Kh. Erekhina (Inst. Microchem. USSR Acad. Sci., Moscow). Doklady Akad. Nauk S.S.S.R. 103, 1029-32 (1965). — Chlorination of 1,1-dichloro-1-alkenes in H_2SO_4 at 0–20° results in formation of products, which after hydrolysis yield α -Cl acids (b.p./mm., n_D^{20} , and d_4^{20} given for the compounds reported below). Presumably the intermediate formed is $\text{RC}(\text{CH}_2)_n\text{CHCl}_2\text{OSO}_3\text{H}$. Passage of Cl into 90 g. $\text{Cl}(\text{CH}_2)_3\text{CH}:\text{CCl}_2$ in 130 g. 93% H_2SO_4 at 15–20° until HCl evolution ceased, diln. with H_2O , extn. with CHCl_3 , extn. of the latter with 10% NaOH, and acidification, gave 78% $\text{Cl}(\text{CH}_2)_3\text{CHClCO}_2\text{H}$, 106–7°/1, 1.4825, 1.3121; acid chloride, 80°/3, 1.4840, 1.3513; anilide, m. 58–9°. Among other products found were: starting material and 10 g. $\text{Cl}(\text{CH}_2)_3\text{CHClCO}_2\text{H}$, 85–7°/2, 1.5109, 1.4800. Chlorination of 14 g. $\text{PrCH}:\text{CCl}_2$ in 26 g. H_2SO_4 at 5–10° similarly gave after aq. treatment 71% $\text{PrCHClCO}_2\text{H}$, 93–4°/5, 1.4442, 1.4445; acid chloride, 61–3°/28, 1.4465, 1.4705; anilide, m. 63–4°. $\text{Cl}(\text{CH}_2)_2\text{CH}:\text{CCl}_2$ similarly gave 70% $\text{Cl}(\text{CH}_2)_2\text{CHClCO}_2\text{H}$, 128–30°/1, 1.4804, 1.2411, m. 22–4°; acid chloride, 101°/2, 1.4817, 1.2557; anilide, m. 42–3°. $n\text{-C}_6\text{H}_{13}\text{CH}:\text{CCl}_2$ gave 51% $\text{C}_6\text{H}_{13}\text{CHClCO}_2\text{H}$, 92–3°/1, 1.4485, 1.0830; chloride, 70–7°/13, 1.4498, 1.0800. $\text{Cl}_2\text{C}:\text{CH}(\text{CH}_2)_2\text{CO}_2\text{H}$ gave 77% 2-chloroadipic acid, m. 101–3°. $\text{Cl}_2\text{C}:\text{CH}(\text{CH}_2)_3\text{CO}_2\text{H}$ gave 73% 2-chloropimelic acid, m. 88–9°. $\text{Cl}_2\text{C}:\text{H}(\text{CH}_2)_4\text{CO}_2\text{H}$ gave 69% 2-chloroazelaic acid, m. 69–9°. Cl. C.A. 50, 4707g. G. M. Kosolunoff

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9

PM 8/24

KOST, V. N.

Chlorination of unsaturated polychloro derivatives in acid medium. K. K. Fridlin, V. N. Kost, and A. N. Nemyanov. Inst. Heterocycl. Compds., Moscow. Izv. Akad. Nauk S.S.S.R., Khim. Nauk 1956, 1202-7. Cl. C. A. 50, 4787g. Passage of Cl until satd. into 20 g. 1,1,5-trichloro-1-pentene in 15 ml. Et_2O and 15 ml. concd. HCl satd. with HCl gave 81% 1,1,1,5-tetrachloropentene, b_p 92-3°, n_D^{20} 1.5104, d_4^{20} 1.4815. Similar chlorination of 6,6-dichloro-5-hexenyl cyanide, followed by refluxing of the product 6 hrs. with 1.2 AcOH gave 90% 1,1,1,5-tetrachloro-7-octenoic acid, m_p 47-48°. Similar chlorination of chloro-7-octenoic acid gave 91% 1,1,1,5-tetrachloro-7-octenoic acid, b_p 158-60°, n_D^{20} 1.5018. A more detailed hydrolyzed to $\text{H}_2\text{C}(\text{CH}_2)_4\text{HCO}_2\text{H}$ in 80% yield. Passage of Cl into 18 g. 1,1,5-trichloro-1-pentene in 15 ml. Et_2O and 15 ml. concd. HCl satd. with HCl gave 81% 1,1,1,5-tetrachloropentene, b_p 92-3°, n_D^{20} 1.5104, d_4^{20} 1.4815. Similar chlorination of 6,6-dichloro-5-hexenyl cyanide, followed by refluxing of the product 6 hrs. with 1.2 AcOH gave 90% 1,1,1,5-tetrachloro-7-octenoic acid, m_p 47-48°. Similar chlorination of chloro-7-octenoic acid gave 91% 1,1,1,5-tetrachloro-7-octenoic acid, b_p 158-60°, n_D^{20} 1.5018. A more detailed hydrolyzed to $\text{H}_2\text{C}(\text{CH}_2)_4\text{HCO}_2\text{H}$ in 80% yield.

Frederick R. A. ...

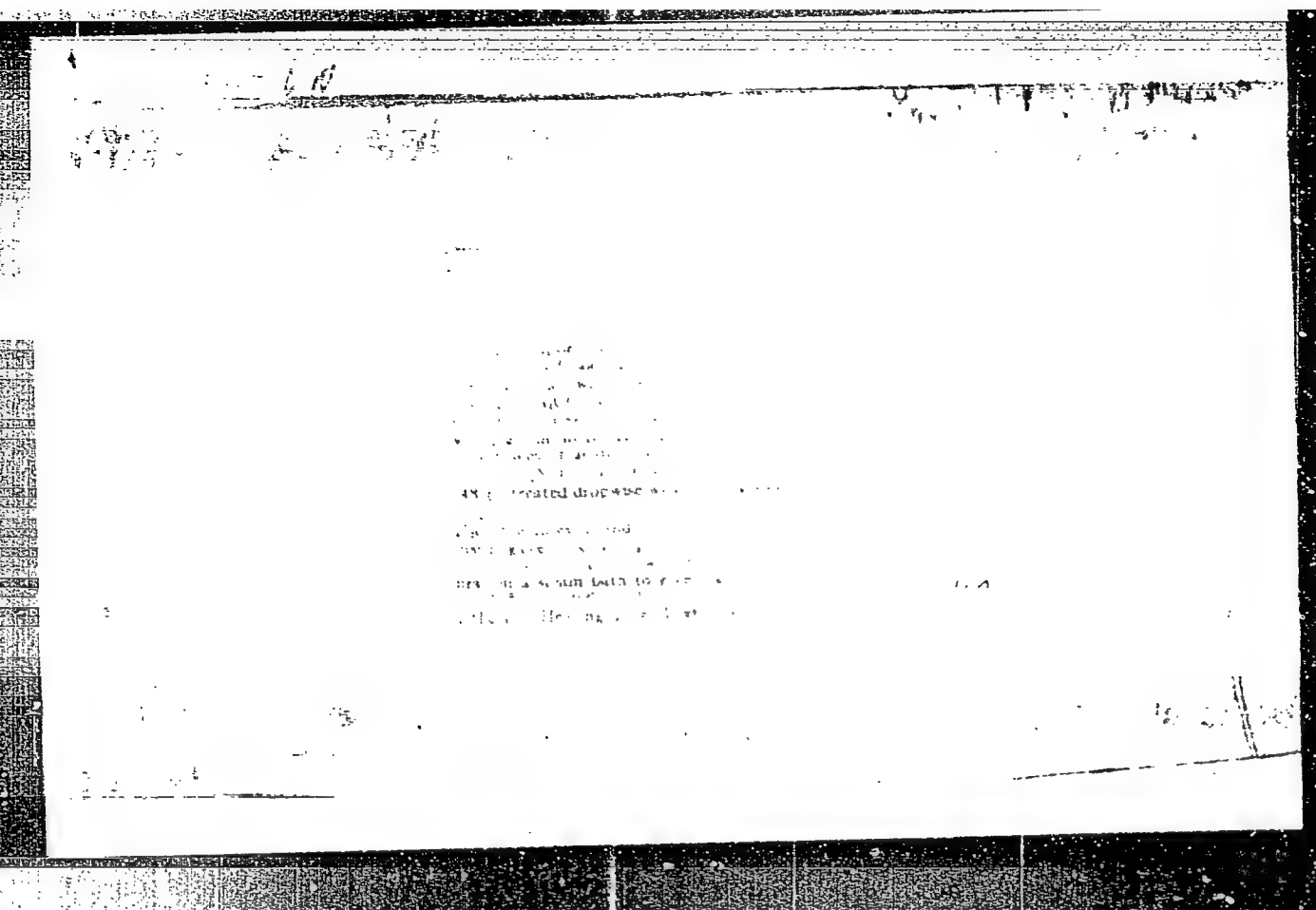
smaller yield of 1,1,2,2-tetrachloro-3-propanol and a

yielding 65% 1,1,2,2-tetrachloro-3-propanol. In CH_2Cl_2 at -40° and a higher-boiling residue, if the chlorination is run in $CHCl_3$, much HCl is evolved and only a small amount of product is isolated. Chlorination of 1,2-dichloro-3-propanol with Cl_2 at -5 to 0°

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ROST, V. N., TRAPANIOT, A. N., TRIVIDINI, M., and MAZZONI, L. E., to USSR

"Homolytic Isomerisation in Polyhalogenalkenes," a paper submitted
at the 16th International Congress of Pure and Applied Chemistry, Paris,
18-24 July 1957.



MESEYANOV, A.K. FREIDLI, D.V. 1974

HCl and H₂O, dried, and distd. gave 1.5 g. (31%) of
d₄ 1.4954, n_D²⁰ 1.4320, n_D^{25} 1.4280, n_D^{30} 1.4240, n_D^{35} 1.4200, n_D^{40} 1.4160, n_D^{45} 1.4120, n_D^{50} 1.4080, n_D^{55} 1.4040, n_D^{60} 1.4000, n_D^{65} 1.3960, n_D^{70} 1.3920, n_D^{75} 1.3880, n_D^{80} 1.3840, n_D^{85} 1.3800, n_D^{90} 1.3760, n_D^{95} 1.3720, n_D^{100} 1.3680, n_D^{105} 1.3640, n_D^{110} 1.3600, n_D^{115} 1.3560, n_D^{120} 1.3520, n_D^{125} 1.3480, n_D^{130} 1.3440, n_D^{135} 1.3400, n_D^{140} 1.3360, n_D^{145} 1.3320, n_D^{150} 1.3280, n_D^{155} 1.3240, n_D^{160} 1.3200, n_D^{165} 1.3160, n_D^{170} 1.3120, n_D^{175} 1.3080, n_D^{180} 1.3040, n_D^{185} 1.3000, n_D^{190} 1.2960, n_D^{195} 1.2920, n_D^{200} 1.2880, n_D^{205} 1.2840, n_D^{210} 1.2800, n_D^{215} 1.2760, n_D^{220} 1.2720, n_D^{225} 1.2680, n_D^{230} 1.2640, n_D^{235} 1.2600, n_D^{240} 1.2560, n_D^{245} 1.2520, n_D^{250} 1.2480, n_D^{255} 1.2440, n_D^{260} 1.2400, n_D^{265} 1.2360, n_D^{270} 1.2320, n_D^{275} 1.2280, n_D^{280} 1.2240, n_D^{285} 1.2200, n_D^{290} 1.2160, n_D^{295} 1.2120, n_D^{300} 1.2080, n_D^{305} 1.2040, n_D^{310} 1.2000, n_D^{315} 1.1960, n_D^{320} 1.1920, n_D^{325} 1.1880, n_D^{330} 1.1840, n_D^{335} 1.1800, n_D^{340} 1.1760, n_D^{345} 1.1720, n_D^{350} 1.1680, n_D^{355} 1.1640, n_D^{360} 1.1600, n_D^{365} 1.1560, n_D^{370} 1.1520, n_D^{375} 1.1480, n_D^{380} 1.1440, n_D^{385} 1.1400, n_D^{390} 1.1360, n_D^{395} 1.1320, n_D^{400} 1.1280, n_D^{405} 1.1240, n_D^{410} 1.1200, n_D^{415} 1.1160, n_D^{420} 1.1120, n_D^{425} 1.1080, n_D^{430} 1.1040, n_D^{435} 1.1000, n_D^{440} 1.0960, n_D^{445} 1.0920, n_D^{450} 1.0880, n_D^{455} 1.0840, n_D^{460} 1.0800, n_D^{465} 1.0760, n_D^{470} 1.0720, n_D^{475} 1.0680, n_D^{480} 1.0640, n_D^{485} 1.0600, n_D^{490} 1.0560, n_D^{495} 1.0520, n_D^{500} 1.0480, n_D^{505} 1.0440, n_D^{510} 1.0400, n_D^{515} 1.0360, n_D^{520} 1.0320, n_D^{525} 1.0280, n_D^{530} 1.0240, n_D^{535} 1.0200, n_D^{540} 1.0160, n_D^{545} 1.0120, n_D^{550} 1.0080, n_D^{555} 1.0040, n_D^{560} 1.0000, n_D^{565} 0.9960, n_D^{570} 0.9920, n_D^{575} 0.9880, n_D^{580} 0.9840, n_D^{585} 0.9800, n_D^{590} 0.9760, n_D^{595} 0.9720, n_D^{600} 0.9680, n_D^{605} 0.9640, n_D^{610} 0.9600, n_D^{615} 0.9560, n_D^{620} 0.9520, n_D^{625} 0.9480, n_D^{630} 0.9440, n_D^{635} 0.9400, n_D^{640} 0.9360, n_D^{645} 0.9320, n_D^{650} 0.9280, n_D^{655} 0.9240, n_D^{660} 0.9200, n_D^{665} 0.9160, n_D^{670} 0.9120, n_D^{675} 0.9080, n_D^{680} 0.9040, n_D^{685} 0.9000, n_D^{690} 0.8960, n_D^{695} 0.8920, n_D^{700} 0.8880, n_D^{705} 0.8840, n_D^{710} 0.8800, n_D^{715} 0.8760, n_D^{720} 0.8720, n_D^{725} 0.8680, n_D^{730} 0.8640, n_D^{735} 0.8600, n_D^{740} 0.8560, n_D^{745} 0.8520, n_D^{750} 0.8480, n_D^{755} 0.8440, n_D^{760} 0.8400, n_D^{765} 0.8360, n_D^{770} 0.8320, n_D^{775} 0.8280, n_D^{780} 0.8240, n_D^{785} 0.8200, n_D^{790} 0.8160, n_D^{795} 0.8120, n_D^{800} 0.8080, n_D^{805} 0.8040, n_D^{810} 0.8000, n_D^{815} 0.7960, n_D^{820} 0.7920, n_D^{825} 0.7880, n_D^{830} 0.7840, n_D^{835} 0.7800, n_D^{840} 0.7760, n_D^{845} 0.7720, n_D^{850} 0.7680, n_D^{855} 0.7640, n_D^{860} 0.7600, n_D^{865} 0.7560, n_D^{870} 0.7520, n_D^{875} 0.7480, n_D^{880} 0.7440, n_D^{885} 0.7400, n_D^{890} 0.7360, n_D^{895} 0.7320, n_D^{900} 0.7280, n_D^{905} 0.7240, n_D^{910} 0.7200, n_D^{915} 0.7160, n_D^{920} 0.7120, n_D^{925} 0.7080, n_D^{930} 0.7040, n_D^{935} 0.7000, n_D^{940} 0.6960, n_D^{945} 0.6920, n_D^{950} 0.6880, n_D^{955} 0.6840, n_D^{960} 0.6800, n_D^{965} 0.6760, n_D^{970} 0.6720, n_D^{975} 0.6680, n_D^{980} 0.6640, n_D^{985} 0.6600, n_D^{990} 0.6560, n_D^{995} 0.6520, n_D^{1000} 0.6480, n_D^{1005} 0.6440, n_D^{1010} 0.6400, n_D^{1015} 0.6360, n_D^{1020} 0.6320, n_D^{1025} 0.6280, n_D^{1030} 0.6240, n_D^{1035} 0.6200, n_D^{1040} 0.6160, n_D^{1045} 0.6120, n_D^{1050} 0.6080, n_D^{1055} 0.6040, n_D^{1060} 0.6000, n_D^{1065} 0.5960, n_D^{1070} 0.5920, n_D^{1075} 0.5880, n_D^{1080} 0.

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✓ Homolytic isomerization of 1,1-dichloro-2-bromopropane

in a radical isomerization
 1,1-dichloro-2-bromopropane
 quinone or azobenzene under the isomerization. The reaction
 is believed to be a radical process with initial cleavage

in the case of 1,1-dichloro-2-bromopropane. All the trichlorobromopropanes
 were identified also as acid HCl salts of their
 Br-N derivatives, prepared by addition of Et₃NH in MeOH. CCl₃-
 CH₂CH₂NEt₃ b. 69°, 1.5070, 1.4000; HCl salt, m. 144-5°.
 CCl₃CH₂CH₂Br and Br in CHCl₃ with chlorine gas gave CCl₃-
 CH₂CH₂Br, containing 10% of CCl₃-CH₂CH₂Br.

Kost, V. N.

AUTHORS: Nesmeyanov, A. N., Kost, V. N.,
Vasil'yeva, T. T., Freydlina, R. Kh.

62-2-4/28

TITLE: The Synthesis of α -Haloidcarboxylic Acids Containing Reactive Groups in the ω -Position (Sintez α -galoidkarbonovykh kislot, soderzhashchikh v ω -polozhenii reaktsionnosposobnyye gruppy).

PERIODICAL: Izvestiya AN SSSR Otdeleniye Khimicheskikh Nauk, 1958, Nr 2, pp. 152-156 (USSR).

ABSTRACT: As was already shown (references 1,2) α -perchloric acids can easily be produced in a sulfate medium by the action of chlorine upon compounds containing a $\text{CCl}_2 = \text{CH}$ -group. A similar reaction also takes place in perchloric acid. In the series of cases hitherto investigated the experiment failed in the medium of phosphoric acid and acetic acid (reference 2). The employment of this method in compounds possessing no stable groups in a medium of strong acids is therefore not possible. In the present work it was found that the compounds of the type $\text{CCl}_2 = \text{CX}(\text{CH}_2)_n \text{Y}$ (where X is a halide or H, and where Y represents various groups) interact with acetic acid and the halide in the presence of mercury acetate after treatment with H_2O . On this occasion α -haloidcarboxylic acids or .

Card 1/2

The Synthesis of α -Haloidcarboxylic Acids Containing Reactive Groups in the ω -Position. 62-2-4/28

α, α -dihaloidcarboxylic acids form.

In this manner the following acids were produced:

$\text{Cl}(\text{CH}_2)_3\text{CHClCOOH}$; $\text{Cl}(\text{CH}_2)_3\text{CHBrCOOH}$; $\text{CH}_3\text{COO}(\text{CH}_2)_3\text{CHClCOOH}$;

$\text{CN}(\text{CH}_2)_3\text{CHClCOOH}$; $\text{CH}_3\text{COOCH}_2\text{CHClCOOH}$; $\text{CH}_3\text{OCH}_2\text{CHClCOOH}$;

$\text{C}_6\text{H}_5\text{CH}_2\text{CHClCOOH}$; $\text{Cl}(\text{CH}_2)_3\text{CCl}_2\text{COOH}$.

There are 6 references, 5 of which are Slavic.

ASSOCIATION: Institute for Element-Organic Compounds AN USSR (Institut elementoorganicheskikh soedineniy Akademii nauk SSSR).

SUBMITTED: September 25, 1956

AVAILABLE: Library of Congress

1. Perchloric acids 2. α -Haloidcarboxylic acids-Synthesis

Card 2/2

AUTHORS: Nesmeyanov, A. N., Freydlina, R. Kh., SOV/62-58-10-6/25
Kost, V.N.

TITLE: Homolytic Isomerization of 1,1,1-Trichloro-2-Bromo Propene
(Gomoliticheskaya izomerizatsiya 1,1,1-trikhlor-2-brompropena)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, Nr 10, pp 1199-1204 (USSR)

ABSTRACT: The possibility of regrouping the free radicals in solutions
has been proved in several papers (Refs 4-9). In a number of
other papers (Refs 9, 11, 12) it was shown that the neopentyl
radical can be isomerized. Therefore in publications data are
given that contradict each other with respect to the possibility
of a regrouping of the radicals (at the expense of the migration
of methyl groups). In the present paper the authors report on
the homolytic isomerization of 1,1,1-trichloro-2-bromo propene
in 1,1,2-trichloro-3-bromo propene-1 according to the scheme



Card 1/2

Furthermore the authors deal with a case of homolytic
isomerization of $\text{CCl}_3\text{CBr} = \text{CH}_2$ discovered by themselves. They

Homolytic Isomerization of 1,1,1-Trichloro-2-Bromo
Propene

SOV/62-58-10-6/25

show that 1,1,1-trichloro-2-bromo propene executes the allyl regrouping (under the action of antimony pentachloride or aluminum chloride). Then 1,1,3-trichloro-2-bromo propene-1 is formed. Under the action of caustic potash on 1,1,1-trichloro-2,3-dibromo propene in ethyl-cellosolve medium the 1,1,1-trichloro-2-bromo propene was obtained as the only product of the reaction. Its isomerization takes place in a homolytic way under the action of ultraviolet rays and with a simultaneous formation of 1,1,2-trichloro-3-bromo propene; 1,1,1-trichloro propene isomerizes according to the heterolytic way under the action of antimony pentachloride with the simultaneous formation of 1,1,3-trichloro-2-bromo propene. There are 22 references, 5 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk SSSR
(Institute of Elementary Organic Compounds, Academy of
Sciences, USSR)

SUBMITTED: March 7, 1957
Card 2/2

AUTHORS: Nesmeyanov, A. N., Freydlina, R. Kh., SOV/62-58-10-7/25
Kost, V. N.

TITLE: Bromination of 1,1,1-Trichloropropene
(Bromirovaniye 1,1,1-trikhlorpropena)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, Nr 10, pp 1205-1207 (USSR)

ABSTRACT: Two of the authors mentioned above together with Firstov described in an earlier paper the bromination of 1,1,1-trichloropropene (Ref 1). In a later paper they found the regrouping of the intermediately forming free radical (Ref 2) when investigating the reaction of hydrogen bromide and bromo-trichloromethane with 1,1,1-trichloropropene in the presence of benzoyl peroxide. It was assumed that (dependent on the conditions of reactions) the bromination of 1,1,1-trichloropropene takes place without regrouping (electrophilic reaction) or with it (homolytic reaction). The authors of the present paper investigated the reaction of the bromination of 1,1,1-trichloropropene and obtained the following results: In highly polar media the reaction takes place well defined with the simultaneous formation of the normal

Card 1/2

Bromination of 1,1,1-Trichloropropene

SOV/62-58-10-7/25

combination product of 1,1,1-trichloro-2,3-dibromopropane. If the reaction is carried out in unpolar media 1,1,2-trichloro-1,3-dibromo propane (due to the homolytic isomerization of the not intermediately formed free radical $\text{CCl}_3\dot{\text{C}}\text{H} - \text{CH}_2\text{Br} \rightarrow \dot{\text{C}}\text{Cl}_2\text{CHCl} - \text{CH}_2\text{Br}$) is formed. There are 6 references, 5 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR
(Institute of Elementary Organic Compounds, Academy of Sciences USSR)

SUBMITTED: March 7, 1957

Card 2/2

5 (3)

AUTHORS:

Freydlina, R. Kh., Kost, V. N.,
Vasil'yeva, T. T., Nesmeyanov, A. N.

SOV/62-59-5-10/40

TITLE:

Synthesis of D,L- α -aminocarboxylic Acids From Compounds Con-
taining the $\text{CCl}_2=\text{CH}$ Group (Sintez D,L- α -aminokarbonovykh kislot
iz soyedineniy soderzhashchikh $\text{CCl}_2=\text{CH}$ -grupp)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 5, pp 826 - 830 (USSR)

ABSTRACT:

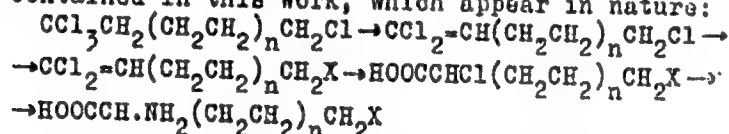
In this work the ammonolysis of some α -chlorocarboxylic acids was investigated which had been synthesized from tetrachloroalkanes by the effect of sulfuric acid or acetic acid in the presence of mercury acetate. This investigation was carried out in order to find a way of synthesizing amino acids and their analogues appearing in nature from tetrachloroalkanes. The synthesis is rather difficult and, in the case of chlorine derivatives, the yield is small according to data from publications. Two authors of this work and Petrov (Ref 7) succeeded in synthesizing D,L-proline and D,L-ornithine from α,δ -dichloro- and α -chloro- δ -phthalimidovalerianic acid; they showed that the yield does not depend on the nature of the halogen in α -position. In this work the initial products α -chlorodipinic, α -

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Compounds Containing the $\text{CCl}_2=\text{CH}$ Group

SOV/62-59-5-10/40

chloropimelic, and α -chlorosuberic acid were obtained (Ref 2); α -chloroglutaric acid and α -chloro- β -(p-chlorophenyl)propionic acid (Ref 8) and α -chloro- ϵ -phthalimido-hexanoic acid were obtained under the same conditions from 1,1-dichloro-6-phthalimido-hexene-1 and 1,1-dichloro-3-(p-chlorophenyl propene. The best method was that of the synthesis of α -chloro- β -phenylpropionic acid from chlorophenyldiazonium and acrylonitrile according to the Merrwein reaction (Ref 10) with subsequent hydrolysis of nitrile of α -chloro- β -phenylpropionic acid. Starting from the $\alpha,\alpha,\alpha,\omega$ -tetrachloroalkane mentioned, the following scheme is valid for the synthesis of the α -amino acids (phenylalaline, p-chlorophenylalanine, glutamic acid, α -amino-adipic acid, α -aminopimelic acid, α -aminosuberic acid, and lysine) contained in this work, which appear in nature:



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$n = 0, 1, 2, \dots$; $\text{X} = \text{C}_6\text{H}_5, \text{ClC}_6\text{H}_4, \text{COOH}, \text{C}_2\text{H}_2\text{COOH}, \text{C}_6\text{H}_4(\text{CO})_2\text{N}$

Synthesis of D,L- α -aminocarboxylic Acids From
Compounds Containing the $\text{CCl}_2=\text{CH}$ Group

SOV/62-59-5-10/40

It was also shown that the synthesis of α -chloro- β -phenylpropionic acid can be carried out by the effect of chlorine on 1,1-dichloro-3-phenylpropene-1 in a formic acid medium with a yield of 63% of the theoretical yield, that is, without addition of mercury salts if anhydrous formic acid is used. There are 19 references, 10 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk SSSR
(Institute of Elemental-Organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: August 2, 1957

Card 3/3

5.3600

77066

SOV/62-59-12-10/43

AUTHORS: Kost, V. N., Sidorova, T. T., Freydina, R. Kh.,
Nesmeyanov, A. N.

TITLE: Synthesis of α -Chlorocarboxylic Acids by Addition of
Chlorine in Formic Acid to Compounds Containing the
 $\text{Cl}_2\text{C}=\text{CH}-$ Group

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1959, Nr 12, pp 2122-2125 (USSR)

ABSTRACT: The reaction



is conducted by gradually passing chlorine through a
solution of appropriate chloroolefin at 30° . The follow-
ing acids were prepared in this manner: α, β -dichloro-
propionic acid; α -chloro- β -methoxypropionic acid;
 α -chloro- β -formoxypropionic acid, yield 73%, mp $66-67^\circ$
(from benzene); α -chloro- δ -formoxyvaleric acid, yield

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by Addition of Chlorine in Formic Acid
to Compounds Containing the $\text{Cl}_2\text{C}=\text{CH}-$
Group

77066

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82%, bp 138° (1.5 mm), n_D^{20} 1.4671; α, δ -dichlorovaleric
acid, α, ω -dichloroheptanoic acid; and α, ω -dichloro-
nonanoic acid, yield 71%, bp $142-143^\circ$ (0.5 mm),
 n_D^{20} 1.4768. There are 8 Soviet references.

ASSOCIATION: Institute of Element-Organic Compounds, Academy of
Sciences, USSR. (Institut elementoorganicheskikh
soyedineniy Akademii nauk SSSR)

SUBMITTED: March 25, 1958

Card 2/2

5 (2, 3)

AUTHORS:

Freydlina, R. Kh., Corresponding Member SOV/20-128-2-26/59
AS USSR, Kost, V. N., Khorlina, M. Ya., Nesmeyanov, A. N.,
Academician

TITLE:

Addition of Hydrogen Bromide to 1,1,1,2-Tetrachloropropene-2
and 1,1,2-Trichloropropene-2 in the Presence of Benzoyl Peroxide

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 316-319 (USSR)

ABSTRACT:

The authors investigated the above topic in continuation of their own previous papers (Refs 1, 2) as well as in cooperation with L. I. Zakharkin (Ref 3) and A. B. Belyavskiy (Ref 4) on rearrangements of free radicals. The interaction between HBr and the substance mentioned first in the title led to a mixture of products. 1,1,2,2-Tetrachloro-3-bromopropane (I) with a yield of approximately 30% was isolated from the latter in addition to other compounds (II) - (IV) (see Scheme). The existence of (I) and (II) shows that the addition proceeds here with a rearrangement of the type mentioned in references 1-4. The intermediate radicals are apparently comparatively little stable and decompose under separation of a chlorine atom. The yield of (I) is therefore low, and (II) - (IV) occur in the reaction products. With respect to its composition,

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Addition of Hydrogen Bromide to 1,1,1,2-Tetrachloro- SOV/20-128-2-26/59
propene-2 and 1,1,2-Trichloropropene-2 in the Presence of Benzoyl Peroxide

constants, and infrared spectrum, substance I is identical with the 1,1,2,2-tetrachloro-3-bromopropane produced by the authors according to another scheme (see there), it differs, however, from the 1,1,1,2-tetrachloro-3-bromopropane produced by the chlorination of the $\text{CCl}_2=\text{CH}-\text{CH}_2\text{Br}$ with respect to

constants and infrared spectrum. Ethyl cellosolve HCl is split off from substance I by treatment with alkalis, which results in the production of compound III. The latter was identified as hydrochloride of the diethyl-amine derivative $\text{CCl}_2=\text{CCl}-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)_2 \cdot \text{HCl}$ (V). As far as constants and

infrared spectrum are concerned, compound II corresponds to 1,1,2,2,3-pentachloropropene. Trichlorobromopropene III together with diethyl-amine and thiourea yields derivatives which were identified as hydrochloride and picrate respectively. When reacting with Hg, substance III yielded the trichloroallyl-mercury bromide which was identical with that produced by the usual method (Ref 5). As to its properties, tetrachloropropene IV corresponds to the well-known 1,1,2,3-tetrachloropropene, and together with diethyl-amine it yields the corresponding

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Addition of Hydrogen Bromide to 1,1,1,2-Tetrachloro- SOV/20-128-2-26/59
propene-2 and 1,1,2-Trichloropropene-2 in the Presence of Benzoyl Peroxide

derivative V. The addition of HBr to 1,1,2-trichloropropene-2 proceeds without rearrangement under formation of 1,1,2-trichloro-3-bromopropane (see Scheme). This reaction course is apparently connected with a greater stability of the radical A produced as against the radical $\text{CHClCCl}_2\text{CH}_2\text{Br}$ which might be produced by a rearrangement. As to its constants, composition, and infrared spectrum, substance VI, i.e. $\text{HCCl}_2 - \text{CHCl} - \text{CH}_2\text{Br}$, which was produced in the last-mentioned reaction, is identical with the 1,1,2-trichloro-3-bromopropane. The isothiouraea derivative furthermore obtained as picrate is identical with the corresponding derivative synthesized from the well-known 1,1,2-trichloro-3-bromopropane. There are 8 references, 7 of which are Soviet.

SUBMITTED: June 5, 1959

Card 3/3

5.3200

5.3600

S/020/60/132/03/32/066
B011/B008

AUTHORS: Kost, V. N., Sidorova, T. T., Freydlina, R. Kh.,
Corresponding Member AS USSR, Nesmeyanov, A. N., Academician

TITLE: Homolytic Addition of Hydrogen Bromide to 1-Fluoro-1,
1-Dichloropropene

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 3,
pp. 606-608

TEXT: The authors determined in their paper the divergent behavior of 1-fluoro-1, 1-dichloropropene in the reaction of the homolytic addition from that of 1,1,1-trichloropropene. Two fluoro-dichloro-bromopropanes were obtained as a consequence of the reaction of the 1-fluoro-1, 1-dichloropropene with HBr at an ultraviolet exposure: 1-fluoro-1, 1-dichloro-3-bromopropane and 1-fluoro-1,2-dichloro-3-bromopropane at a ratio 2:1. The reaction proceeded as chain reaction of free radicals. The addition of HBr to 1,1,1-trichloro-propene leads, under equal conditions, to a single product: 1,1,2-trichloro-3-bromopropane. 4

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Homolytic Addition of Hydrogen Bromide
to 1-Fluoro-1, 1-Dichloropropene

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That means, the reaction takes its course under a regrouping in the free radical developing in the meantime (similar to the case of the initiation of the reaction by benzoyl peroxide, Ref. 4). The scheme (I) illustrates the reaction of the fluoro-dichloro-propene with HBr. Apparently, the rate of regrouping of the radical $\text{CH}_2\text{BrCHCl}_2\text{F}$ is reduced considerably due to the stabilizing action of the fluorine in it. Thus, this rate gets commensurable to that of this radical with HBr. This double mode of reaction of the free radical (with or without regrouping) is observed here for the first time. The authors proved the structure of the produced fluoro-dichloro-bromopropane on schemes (II) and (III) as well as by the production of the picrates and other reactions. There are 11 references, 9 of which are Soviet..

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk
SSSR (Institute of Elemental Organic Compounds of the
Academy of Sciences, USSR)

SUBMITTED: February 24, 1960

Card 2/2

FREYDLINA, R.Kh.; KOST, V.N.; KHOZINA, M.Ya.; NISSEYANOV, A.N., akademik

Rearrangements in the homolytic addition of hydrogen bromide to
poly(halo alkenes). Dokl. AN SSSR 137 no.2:341-344 Mr '61.

(MIRA 14:2)

1. Institut elementoorganicheskikh soedineniy AN SSSR. Khim.-korres-
pondent AN SSSR (for Freydlina).

(Hydrogen bromide)

(Unsaturated compounds)

KHORLINA, M.Ya.; KOST, V.N.

Homolytic isomerization of 2-bromo-3, 3-dichloro-1-butene. Dokl. AN
SSSR 137 no.5:1133-1136 Ap '61. (MIRA 14:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Pred-
stavleno akademikom A.N. Nesmeyanovym.
(Butene)

FREYDLINA, R.Kh.; KOST, V.N.; VASII'YEVA, T.T.; NESMEYANOV, A.N., akademik

Homolytic isomerization of 1-fluoro-1, 1-dichloro-2-bromopropene.
Dokl.AN SSSR 137 no.6:1385-1388 Ap '61. (MIRA 14:4)

1. Institut elementoorganicheskikh soedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Freydlina).
(Propene)

S/081/62/000/014/009/039
B166/B144

AUTHORS: Nesmeyanov, A. N., Freydlina, R. Kh., Kost, V. N.,
Khorlina, M. Ya., Sidorova, T. T., Petrova, R. G.,
Terent'yev, A. B.

TITLE: Connection between the structure of polyalkylhalide radicals
and their ability to regroup in solution

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 178, abstract
14Zh41 (Tr. po khimii i khim. tekhnol. [Gor'kiy], no. I,
1961, 106-115)

TEXT: A review of the authors' work on the homolytic addition of HBr,
 CCl_3 , Br, Br_2 , $\text{C}_6\text{H}_5\text{SH}$ and $\text{C}_6\text{H}_5\text{CH}_2\text{SH}$ to olefins $\text{XCCl}_2\text{CY} = \text{CH}_2$ (I), where
 $\text{X} = \text{Cl}, \text{F}, \text{H}, \text{CH}_3$ and $\text{Y} = \text{H}, \text{Cl}, \text{Br}, \text{CH}_3$. The results of the work show
that the aforesaid reactions proceed according to the general scheme:
 $\text{I} + \text{HBr} \rightarrow \text{HCCLXCYClCH}_2\text{Br} + \text{CClX} = \text{CYCH}_2\text{Br} + \text{HCCLXCYClCH}_2\text{Cl}$. This
indicates that the initially formed polyalkylhalide radicals (PR) are

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S/081/62/000/014/009/039
B166/B144

Connection between the structure ...

rearranged and then stabilized either by adding an H or by dehalogenation; moreover the latter leads to the chain of reaction being continued. The exception is compounds with $X = F$, which along with rearranged products also give products which are not rearranged. It was found that the rearrangement of PR tends towards the formation of more stable radicals. A table of the relative stability of the PR is drawn up:

$\dot{C}Cl_2CHClCH_2X > CCl_3\dot{C}HCH_2X$ (when $X = Br, Cl, CCl_3, C_6H_5$);
 $\dot{C}Cl_2CCl(CH_3)CH_2Br > CCl_3\dot{C}(CH_3)CH_2Br$; $\dot{C}Cl_2CCl_2CH_2Br > CCl_3\dot{C}ClCH_2Br$;
 $\dot{C}HClCHClCH_2Br > CHCl_2\dot{C}HCH_2Br$; $CHCl_2\dot{C}ClCH_2Br > \dot{C}HClCCl_2CH_2Br$;
 $CH_3\dot{C}ClCHClCH_2Br > CH_3CCl_2\dot{C}HCH_2Br$; $CFCl_2\dot{C}HCH_2Br \approx CFClCHClCH_2Br$;
 $\dot{C}FClCBrClCH_2Br \approx CFCl_2\dot{C}BrCH_2Br$. 15 references. [Abstracter's note:
 Complete translation.]

Card 2/2

KOST, V.N.; VASIL'YEVA, T.T.; FREYDLINA, R.Kh.

Rerrangement of radicals in the process of dimerization of
3,3,3-trichloroprene. Izv.AN SSSR.Otd.khim.nauk no.7:1254-1258
Jl '62. (MIRA 15:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Butadiene) (Radicals (Chemistry))

FREIDLINA, P.H. [Freydlina, P. Kh.]; KOST, V.N.; HORLINA, M.I. [Khorlina, M.Ya.]

Rearrangement of radicals in solutions. Analele chimie 17 no.3:131-174 J1-S '62.

FREYDLINA, P.Kh.; KOST, V.N.; KHORLINA, M.Ya.

Rearrangement of radicals in solution. Usp.khim. 31. no.1:
3-38 Ja '62. (MIRA 15:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Radicals (Chemistry))

KOST. V.N.; VASIL'YEVA, T.T.; FREYDLINA, R.Kh.

Rearrangement of radicals in the process of dimerization of
3-fluoro-3,3-dichloropropene and 3-fluoro-2,3,3-trichloropropene.
Dokl. AN BSSR. 7 no.8:538-542 Ag '63. (MIRA 16:10)

1. Institut eksperimental'noy optiki i spektroskopii AN SSSR.

KOST, V.N.; VASIL'YEVA, T.T.; FREYDLINA, R.Kh.

Homolytic transformations of polyhalopropenes containing the
CF₂Cl group. Dokl. AN BSSR 7 no.9:614-618 S '63. (MIRA 17:1)

1. Institut elementno-organicheskikh soyedineniy AN SSSR, Moskva.

BELYAVSKIY, A.B.; KOST, V.N.

Interaction of ethylene with trihalomethanes containing chlorine
and bromine. Izv.AN SSSR.Ser.khim. no.8:1514-1516 Ag '63.
(MIRA 16:9)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Ethylene) (Methane)

VAS'L'YEVA, T.T.; KOST, V.N.

Action of diethylamine on polychlorofluoropropenes of
 $\text{CH}_2=\text{CXCF}_n\text{Cl}_{3-n}$ type. Izv. AN SSSR. Ser.khim. no.9:1587-1591
S '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Diethylamine) (Propene)

KOST, V.N.; VASIL'YEVA, T.T.; ZAKHARKIN, L.I.; FREYDLINA, R.Kh.

Introduction of the radical $\text{CCl}_2 \Rightarrow \text{CHCH}$ - into unsaturated molecules containing an α, α -vinyl dichloride group. Izv. AN SSSR. Ser. khim. no.11:1992-1995 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KOST, V.N.; VASIL'YEVA, T.T.; FREYDLINA, R.Kh.

Rearrangement of polyhalo alkyl radicals containing fluorine in the trihalomethyl group. Izv. AN SSSR Ser. khim. no.2:300-307 (MIRA 18:2) '65.

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 8153-66 ENT(m)/ENP(i) RM.
 ACC NR: AP5027687
 SOURCE CODE: UR/0062/65/000/010/1788/1792
 AUTHOR: Freydlina, R. Kh.; Khorlina, M. Ya.; Kost, V. N. (Deceased)
 ORG: Institute of Organometallic Compounds, Academy of Sciences SSSR
 (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)
 TITLE: Homolytic reactions of the dichlorovinyl group
 SOURCE: AN SSSR. Izvestiya. Khimicheskaya, no. 10, 1965, 1788-1792
 TOPIC TAGS: chemical reaction, halogenated organic compound, mixed halogenated organic compound, organic sulfur compound
 ABSTRACT: The radical addition of various reagents to compounds containing an unsymmetrical dichlorovinyl group was investigated. The addition of HBr to 1,1,3-trichloropropene-1 (A), to 1,1-dichloro-3-bromopropene-1 (B) and 1,1,5-trichloropentene-1, and of n-butylmercaptan or thiophenol to A was accomplished at low temperatures (-35 to 37 C) under ultraviolet illumination. Hydrobromination of B gave 1,1-dichloro-2,3-dibromopropane. Reaction of A with the mercaptan or thiophenol yielded the sulfides $\text{CHCl}_2\text{-CH(SR)CH}_2\text{Cl}$, where R is butyl or phenyl. Homolytic addition of HBr and mercaptans to the dichlorovinyl group resulted in the formation of compounds containing a terminal

UDC: 547.024+541.14
 0222-0238

Card 1/2

L 8153-66

ACC NR: AP5027687

dichloromethyl group. These radical addition reactions were hindered by introduction of substituents in the beta-position to the double bond. Orig. art. has: 3 tables and 5 equations.

SUB CODE: OC/ SUBM DATE: 17Jul63/ ORIG REF: 001/ OTH REF: 000

nw

Card 2/2

FREYDLINA, R.Kh.; KOST, T.A.

Action of nucleophilic reagents on the compounds of $[Cl(CH_2)_nCCl=]_2$
type. Izv.AN SSSR Otd.khim.nauk no.8:1387-1390 Ag '60.
(MIRA 15:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Paraffins) (Hydrogenation)

KOST, Ye. A.

KOST, Ye. A. -- "Hypoplastic and Hyperplastic Processes in Diseases of the Hemopoietic Apparatus." Sub 20 Feb 52, Central Inst for the Advanced Training of Physicians. (Dissertation for the Degree of Doctorate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

1. KOST, Y. A., M. D.
2. USSR (600)
4. Leucosis
7. Tumor-like leucosis. Terap. arkh. 24, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

KOST, Ye.A.

Drug allergy in agranulocytosis, hemorrhagic leukemia, and pancytopenia. Klin. med., Moskva 30 no. 12:31-36 Dec 1952.

(CML 24:1)

1. Doctor Medical Sciences. 2. Of the Clinical Order of Lenin Hospital imeni S. P. Botkin (Head Physician -- S. A. Chesnokov), Moscow.

SEVEROVA, Ye. Ya.; KOST, Ye. A.; RUDNEV, G. P., professor; MYASHNIKOV, A. L.,
professor.

Fever resulting from medication. Terap. arkh. 25 no. 2:82-83 Mr-Apr '53.
(MLRA 6:5)
(Allergy) (Fever)

KOST, Ye.A.

• Hypo- and hyper- regenerative processes in hemopoietic diseases. Ter.
arkh., Moskva 25 no.2:83-84 Mar-Apr 1953. (GLML 24:3)

BAGDASAROV, A.A., professor; KOST, Ye.A., professor (Moskva)

~~XXXXXXXXXXXX~~
Fifth International Congress of Hematology. Klin.med.33 no.7:
18-23 J1 '55. (MLRA 8:12)

1. Chlen-korrespondent AMN SSSR (for Bagdasarov)
(HEMATOLOGY,
cong.)

KOST, Ye. A.

"Spinal fluid." D.A. Shamburov. Reviewed by E.A. Kost. Lab. delo 2
no. 5:30-31 S-O '56. (MLRA 9:11)
(CEREBROSPINAL FLUID) (SHAMBUROV, D.A.)

KOST, Ye. A.

KOST, Ye. A. (Moskva)

Development of laboratory services in the U.S.S.R. during the past
40 years. Lab. delo 3 no. 5:3-4 S-O '57. (MIRA 11:2)
(MEDICAL LABORATORIES)

KOST, Ye. H.

KOST, Ye.A., prof. (Moskva)

Improvement in the work of clinical laboratories under the Soviet
regime. Klin.med. 35 no.10:89-91 0 '57. (MIRA 11:2)

(LABORATORIES
in Russia, clin., develop. (Rus))

FEL'DMAN, T.N., kand.med.nauk (Moskva); FOKIN, V.P., pensioner (Moskva);
KOST, Ye.A., prof., red. (Moskva)

[Transactions of the Fourth All-Union Conference of Laboratory
Physicians] Trudy Vsesoiuznoi nauchnoi konferentsii vrachei-
laborantov. Pod red. E.A.Kost. Sost.T.N.Fel'dman i V.P.Fokin.
Moskva, Izd.pravleniia Vses.nauchnogo ob-va vrachei-laborantov,
1959. 342 p. (MIRA 12:9)

1. Vsesoyuznaya nauchnaya konferentsiya vrachey-laborantov. 4th,
Gorkiy, 1957. 2. Zaveduyushchiy laboratoriyey bol'nitsy im. Ostren-
nova (for Fel'dman). 3. Zaveduyushchiy kafedroy Tsentral'nogo
instituta usovershenstvovaniya vrachey.

(MEDICINE, CLINICAL--CONGRESSES)

~~KOST, Ye. A.~~ Prof.; STENKO, M.I.

"Blood picture and its clinical significance" by D. N. IANOVSKII.
Reviewed by E. A. Kost, M.I. Stenko. Probl. gemat. i perel. krovi
4 no.6:59-61 Je '59. (MIRA 12:8)
(BLOOD) (IANOVSKII, D.N.)

PREDTECHENSKIY, V.Ye.; SMIRNOVA, L.G., red.; KOST, Ye.A., red.

[Manual for clinical laboratory studies] Rukovodstvo po klinicheskim laboratornym issledovaniyam. Izd.5., perer. i dop. Pod red. L.G.Smirnovoi i E.A.Kost. Moskva, Medgiz, 1960. 962 p.
(MIRA 14:10)

(PATHOLOGY—LABORATORY MANUALS)

KOST, Ye.A.

Discussion of the article by Professor I.A. Kassirskii and
Professor G.A. Alekseev "On the nomenclature of blood cells".
Probl. gemat. i perel. krovi 5 no. 8:22-24 Ag '60. (MIRA 14:1)
(BLOOD CELLS)

KOST, Ye.A.; BOKUNYAYEVA, N.I.; IZRAIL'SKAYA, N.M.

"Handbook on laboratory methods of investigation" by G.N.Udintsev,
V.B.Blank, I.S.Timeskov. Reviewed by E.A.Kost, N.I.Bekuninaeva,
N.M.Izrail'skaia. Lab. delo 7 no.3:62-63 Mr '61. (MIRA 14:3)
(MEDICAL LABORATORIES—HANDBOOKS, MANUALS, ETC.)
(UDINTSEV, G.N.) (BLANK, V.B.) (TIMESKOV, I.S.)

ALEKSEYEV, G.A., prof.; BAGDASAROV, A.A., prof.[deceased]; BEYER, V.A., prof.; VOGRALIK, V.G., prof.; DEMIDOVA, A.V., kand. med. nauk; DUL'TSIN, M.S., prof.; ZAKRZHEVSKIY, Ye.B., prof.; KONCHALOVSKAYA, N.M., prof.; KASSIRSKIY, I.A., prof.; KOST, Ye.A., prof.; LOGINOV, A.S., kand. med. nauk; NESTEROV, V.S., prof.; SHERSHEVSKIY, G.M., prof.; YANOVSKIY, D.N., prof.; MYASNIKOV, A.L., prof., otv. red.; TAREYEV, Ye.N., prof., am. otv. red.; SHAPIRO, Ya.Ye., red.; LYUDKOVSKAYA, N.I., tekhn. red.

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